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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,071	10/12/2004	Steven Victor Jones	BR8812	7044

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EXAMINER

MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
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3677

MAIL DATE	DELIVERY MODE
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10/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,071

Applicant(s)

JONES, STEVEN VICTOR

Examiner

Katherine W. Mitchell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1- 3, 5, 7-10, 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1- 3, 5, 7-10, 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102 and 103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

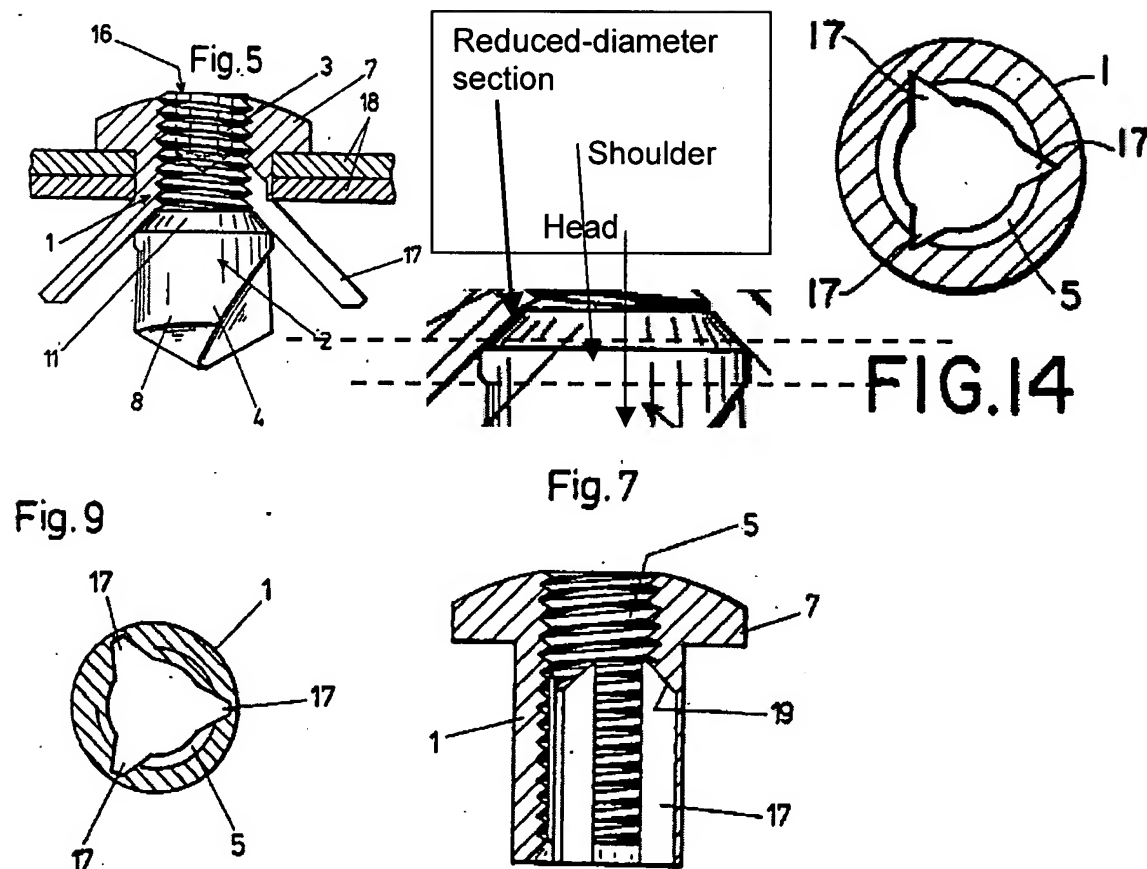
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 3, 5,7-10, 21-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Palm, USP 5183357, or in the alternative, under 35 U.S.C. 103(a) as obvious over Palm in view of Lacey, EP 0344005 or Dawdy US 3671061.



Re claims 1-3, 21-23: Palm teaches a blind rivet assembly comprising:

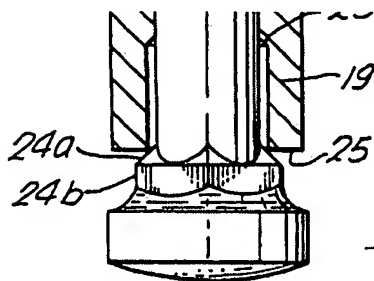
- An elongate tubular body 1 with a shank about a shank axis (Fig 7) and preformed head 7 at first end, and an expandable portion 17 at opposite end from head, said expandable portion defining 3 slots (Fig 9 or 14) that define a triangular aperture having substantially flat sides, noting that substantially flat includes that the side are convex (Figs 9 and 14). The slots are equally spaced about the tubular body circumference as described in claim 3 (Fig 9 and 14).
- There is a mandrel 2 having a coaxial substantially smooth stem and having a

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head with maximum external diameter greater than internal diameter of tubular body, (Fig 5), said head having a shoulder portion engagement surface perpendicular to the stem,

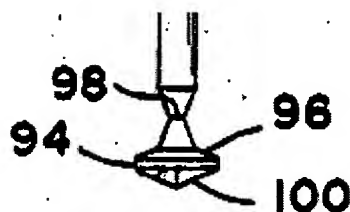
- and at least one of said [three] slots increases in width in a radial direction as it extends from tubular body outer surface to inner surface of said shank, and the substantially flat sides tangentially engage the mandrel (Fig 9, 14)

While examiner thinks Palm teaches a shoulder that can broadly be considered perpendicular to the stem, and a substantially smooth mandrel stem, if it is held that the shoulder engagement surface is not perpendicular and the mandrel stem is not substantially smooth, , Lacey teaches a perpendicular shoulder 24b and a substantially smooth mandrel stem in Fig 4,



or Dawdy teaches a perpendicular shoulder engagement surface and a substantially smooth mandrel stem in Fig 5-8:

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Mandrel 80 includes a main shaft 92 which will fit through the rivet opening 86, and extend a substantial distance out of the head 82. At the bottom of mandrel 80 is an enlarged bottom 94 of greater diameter than shaft 92 and having a top shaft 96 adapted to push upward and outward against the bottoms of weakened sections 88. The mandrel shaft 92 has a relatively small diameter neck 98 just above the enlarged bottom 94, which is designed to break when the mandrel top shaft 96 has pushed weakened sections 88 completely upward and outward.

In the preferred form of the invention, the mandrel includes a drill point 100 on the bottom face of the enlarged bottom 94, for use with a special rivet gun adapted to rotate the rivet, to be described further below.

In FIG. 7, a rivet 50 is being held and affixed by a rivet gun 102, a bottom portion of the gun being shown. Gun 102 includes a hollow anvil 104 permitting a mandrel shaft 92 to extend up into the jawcase 106 disposed within the anvil 104, and be firmly grasped therein by the jaws 108. Jawcase 106 and jaws 108 are axially movable within the hollow anvil whereby mandrel shaft 92 is pulled upwardly, forcing enlarged bottom 94 against weakened sections 88, and head 82 against anvil 104. Further upward movement of rivet 50 is prevented by anvil 104 and consequently further upward movement of mandrel 80 causes weakened sections 88 to bend outward.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Palm and either Lacy or Dowdy before him at the time the invention was made, to modify Palm to include a perpendicular shoulder engagement surface and a substantially smooth mandrel stem, in order to obtain a head section that applies force to the tubular body expandable portion to force the expandable portion segments to separate outward and thus form an expanded portion, and to have "pop-type" pull mandrels rather than mandrels that tighten by screwing, as screwably movable mandrels takes longer to travel the axial distance, and take more elaborate machinery or labor to complete rotary motion.

Re claim 5 and 25: Fig 5 shows the slots having a radially inclined axial inner end so it is longer adjacent said inner surface than said outer surface of tubular body.

Re claim 7-8 and 27-28: Wall thickness and external diameter of said tubular body are constant along axial length of body.

shoul-der (shōl-der) noun

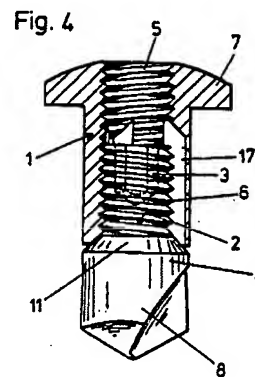
6. An angled or sloping part, as: a. The angle between the face and flank of a bastion in a fortification. b. The area between the body and neck of a bottle or vase.

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7. The area of an item or object that serves as an abutment or surrounds a projection, as: a. The end surface of a board from which a tenon projects.¹

Re claim 9 and 29: Mandrel stem with a circular cross-sectioned reduced diameter section adjacent shoulder portion is taught in Palm (see marked up figure above), in Lacy as 24a and in Dawdy as section between 98 and 96.

Re claim 10 and 30: The maximum diameter of the mandrel head is equal to the



diameter of said tubular body per Palm Fig 4:

Re claim 24: the flat sides are planar per Fig 9 and 14.

Re claim 26: Palm Fig 4 shows a flat bearing surface at the opposed end, engaged with the shoulder.

Response to Arguments

4. Applicant amends to claim “substantially smooth” mandrel stem, noting that Palm fails to disclose this. However, examiner notes applicant’s substantially smooth stem includes a reduced diameter section that is at least as discontinuous from smooth as a thread groove. Further, a threaded surface can be considered substantially smooth –

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the grooves between threads are relatively small relative to the stem diameter. Also, note that either Lacy or Dowdy teach a non-threaded and also smooth stem.

5. Regarding “substantially perpendicular” shoulder portion, examiner does apologize if her typing shorthand did not spell out the entire structure claimed as “substantially perpendicular”. It was the “shoulder portion engagement surface” in claim 21 that is perpendicular to the stem, and “a shoulder portion” in claim 1. “Portion” is broadly considered – any section or portion is considered a portion, not necessarily the entire shoulder area. Regarding the mandrel, the extension portion that is actually protruding to form a shoulder extends perpendicular to the stem. Wording to the effect of –the head having a planar shoulder that is perpendicular to the stem—would appear to read over the art of record.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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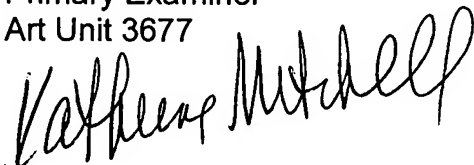
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Primary Examiner
Art Unit 3677



10/2/2007